

Message Text

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ACTION ARA-14

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TO SECSTATE WASHDC 6552
INFO USDOE WASHDC
AMEMBASSY BONN
AMEMBASSY BRUSSELS
AMEMBASSY THE HAGUE
AMEMBASSY LONDON
AMEMBASSY VIENNA

UNCLAS SECTION 1 OF 2 BRASILIA 1990

E.O. 11652: N/A
TAGS: OVIP (CARTER, JIMMY), PLOU, BR, US, ENGR, MNUC
SUBJECT: NUCLEAR ISSUE: RESULTS OF PRESIDENT GEISEL'S TRIP TO FRG

REF: BRASILIA 1769

1. SUMMARY: DURING PRESIDENT GEISEL'S VISIT TO GERMANY,
SCIENCE AND TECHNOLOGY AGREEMENTS WERE SIGNED IN THE FOLLOWING
AREAS: INDUSTRIAL R AND D IN A VARIETY
OF TECHNICAL AREAS; APPLICATION OF NUCLEAR PROCESS
HEAT TO COAL GASIFICATION PROGETS; R AND D IN ADVANCED
REACTORS AND U-TH FUEL CYCLES IN ALL TYPES OF REACTORS, IN-
CLUDING PWR; SECURITY OF NUCLEAR FACIBITIES; ESTABLISHMENT OF A
JOINT VENTURE TO PRODUCE THORIUM FOR REATOR FUEL. A SIXTH
AGREEMENT ON OIL SHALE EXTRACTION UTILIZING PROCESS
HEAT WAS CONTEMPLATED, AND A COMMERCIAL PROPOSAL FOR HVDC
LONG DISTANCE TRANSMISSION WAS PRESENTED. IN ADDITION,
FURTHER DEVELOPMENT OF THE INTERNAL URENCO DISPUTE OVER
SUPPLY OF REACTOR FUEL TO BRAZIL LED TO A CLEAR STATEMENT
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OF BRAZIL'S EXPECTATION THAT FUEL FOR ALL ITS REACTORS (IN-
CLUDING THE US-BUILT ANGRA-1) WILL BE AVAILABLE IN EUROPE,
AND SUGGESTIONS THAT BRAZIL WILL NOT RENEGOTIATE ITS AGREEMENT
FOR COOPERATION WITH THE US. END SUMMARY.

2. THE REPORTING OF BRAZILIAN JOURNALISTS ACCOMPANYING PRESI-
DENT GEISEL IN THE FRG GAVE STRONG INDICATIONS THAT ONE OF THE

MORE PRODUCTIVE ASPECTS OF THE VISIT FOR BRAZIL WAS IN THE SCIENCE AND TECHNOLOGY AREA.
THE FOLLOWING LISTING OF AGREEMENTS REACHED IS
BASED ON BRAZILIAN PRESS REPORTING.

3. THE FIRST OF THE AGREEMENTS SIGNED ON MARCH 8 WAS
AN UMBRELLA AGREEMENT BETWEEN THE SECRETARIAT OF INDUSTRIAL
TECHNOLOGY OF THE BRAZILIAN MINISTRY OF INDUSTRY AND COM-
MERCE AND THE JUELICH NUCLEAR RESEARCH CENTER FOR INDUSTRIAL
TECHNOLOGY RESEARCH AND DEVELOPMENT IN THE FOLLOWING AREAS:

A) METALURGY OF SPECIAL METALS AND THEIR ALLOYS. ALTHOUGH
THIS SUBHEADING OF THE UMBREALLA AGREEMENT IS TITLED IN GENERAL
TERMS, THE ONLY AREA OF COOPERATION APPARENTLY CONTEMPLATED
IS IN APPLICATION OF NIOBIUM NIOBIUM-STEEL ALLOYS. THE
HEAD OF THE SECREATARIAT OF INDUSTRIAL TECHNOLOGY, JOSE WALTER
BAUTISTA VIDAL, WAS QUOTED IN THE FOLHA DE SAO PAULO OF
MARCH 7 AS SAYING THAT THE REAL OBJECT OF GOB-FRG CO-
OPERATION IN NIOBIUM RESEARCH IS TO FIND INDUSTRIAL APPLI-
CATIONS IN BRAZIL FOR NIOBIUM, WHICH IS PRESENTLY BEING EX--
PORTED IN MINERAL FORM AT US\$16 A TON. JOINT RESEARCH ON
NIOBIUM WILL FOCUS ON ITS USE IN LIGHT WEIGHT HIGH STRENGTH
STELL ALLOYS AND ITS SUPERCONDUCTIVITY CHARACTERISTICS. RE-
SEARCH COSTS ARE TO BE SPLIT 50-50, BUT THE AMOUNT OF INVEST-
MENT CONTEMPLATED HAS NOT BEEN PUBLISHED.

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B) INDUSTRIAL WELDING. VIDAL WAS QUOTED BY THE FOLHA AS IN-
DICATING THAT A BRAZILIAN WELDING INSTITUTE WOULD BE FORMED
TO SET INDSUTRIAL STANDARDS, AND AS POINTING OUT THAT ONE
AREA IN WHICH WELDING TECHNIQUES AND QUALITY CONTROL WERE
CRITICAL WAS IN THE NUCLEAR AREA.

C) CORROSION CONTROL. ASIDE FROM INDICATING THAT THIS IS
AN AREA OF SERIOUS CONCERN FOR BRAZIL, VIDAL DID NOT COMMENT
ON AREAS IN WHICH CORROSION CONTROL RESEARCH WOULD BE CON-
CENTRATED.

D) INDUSTRIAL PRODUCT QUALITY CONTROL. THIS WILL EVENTUALLY
INCLUDE THE CREATION OF STANDARDS INSTITUTES,
BUT ON AN INDUSTRY-BY-INDUSTRY BASIS RATHER THAN ON A NATION-
WIDE BASIS. THE FIRST INSTITUTE TO BE
CREATED UNDER THE AGREEMENT WILL BE THE NUCLEAR INDUSTRY
STANDARDS INSTITUTE, WHICH HAS ALREADY LED TO CONFLICTING
CLAIMS FROM VIDAL AND BRAZILIAN NATIONAL NUCLEAR COMMISSION
(CNEN) HEAD HERVASIO GUIMARAES DE CARVALHO OVER WHICH
AGENCY-CNEN OR THE AS YET NOT ESTABLISHED NUCLEAR STANDARDS
INSTITUTE-WOULD HAVE ULTIMATE REGULATORY AUTHORITY OVER
NUCLEAR INDUSTRY QUALITY CONTROL STANDARDS.

E) BIOCONVERSION OF ORGANIC MATERIAL. THE PRIMARY FOCUS OF THIS RESEARCH APPEARS TO BE UPON EXTRACTION OF PROTEINS FROM WASTES OF THE PROCESS OF ALCOHOL PRODUCTION FROM ORGANIC MATERIALS, FOR SUBSEQUENT USE IN ANIMAL FEEDS AND IN THE CHEMICAL INDUSTRY.

4. THE SECOND OF THE MARCH 8 AGREEMENTS IS A "SPECIAL CONVENTION" BETWEEN THE JUELICH RESEARCH INSTUTE, KRAFT-WERKEUNION (KWU), AND NUCLEBRAS FOR RESEARCH IN COAL GASIFICATION. THE AGREEMENT CONTEMPLATES UTILIZING HIGH-TEMPRATURE NUCLEAR REACTORS AS THE SOURCE OF PROCESS HEAT FOR COAL GASIFICATION.

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5. THE LAST OF THE MARCH 8 AGREEMENTS IS A "DECLARATION OF INTENT" SIGNED BETWEEN THE JUELICH RESEARCH INSTITUTE AND NUCLEBRAS ON RESEARCH IN HIGH TEMPERATURE REACTORS, HIGH TEMPRATURE GAS COOLED FAST BREEDER REACTORS, AND THE URANIUM-THORIUM FUEL CYCLE IN THESE AND LIGHT WATER REACTORS. THE FACT THAT THIS IS A "DECLARATION OF INTENT" EMPHASIZES ONCE AGAIN THAT AT PRESENT THIS IS NOT A FULLY THOUGHT OUT AGREEMENT. THERE HAS NONETHELESS BEEN SUBSTANTIAL PRESS COMMENT ABOUT IT-MINISTER OF MINES AND ENERGY SHIGEAKI UEKI WAS QUOTED IN THE MARCH 7 ISSUE OF THE O ESTADO DE SAO PAULO AS SAYING THAT THE SAO PAULO STATE INSTITUTE OF ATOMIC ENERGY (IEA) HAD BEEN CLOSELY CONSULTED ABOUT

THE AGREEMENT ON HTR AND THORIUM, WOULD BE COLLABORATING IN THE PROGRAM, AND WOULD BE CONTRIBUTING FUNDS TO IT. THIS WAS FOLLOWED BY AN ARTICLE IN THE ESTADO ON MARCH 8 CLAIMING, AMONG OTHER THINGS, THAT "QUOTE AS USUAL, THE BRAZILIAN SCIENTIFIC COMMUNITY WAS THE LAST TO KNOW (ABOUT THE HTR/THORIUM AGREEMENT) END QUOTE AND THAT WHAT THE SCIENTIFIC COMMUNITY IS SEEKING IS SOMETHING MORE THAN QUOTE A TELEPHONE UNCLASSIFIED

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CALL FROM UEKI TO PROFESSOR GOLDEMBERG (OF THE SAO PAULO UNIVERSITY INSTITUTE OF PHYSICS). END QUOTE PROFESSOR JAIR CARLOS MELO, OF THE FEDERAL UNIVERSITY OF MINAS GERAIS, WHO WAS ONE OF THE FOUNDERS OF THE THORIUM GROUP IN 1965 (THE GROUP WAS DISBANDED IN 1970 FOR LACK OF INTEREST), POINTED OUT IN THE JORNAL DO BRASIL ON MARCH 9 THAT THERE ARE PERHAPS TEN THORIUM SPECIALISTS IN BRAZIL, NONE OF WHOM ARE CONNECTED WITH GOB NUCLEAR PROGRAM. HE SAID THAT THE BRAZILIAN THORIUM GROUP HAD SPECIALIZED IN THEORETICAL STUDIES OF THE MIXED THORIUM-URANIUM FUEL CYCLE IN PRESSURIZED HEAVY-WATER REACTORS (PHWR) ALTHOUGH MELO HIMSELF HAD GONE ON TO WORK ON PWR APPLICATIONS. MELO MADE A SPECIAL POINT OF EMPHASIZING THAT THERE HAS BEEN ALMOST NO WORK ON THORIUM FUEL IN PWR OR PHWRs IN THE FRG, AND THAT BRAZILIAN SPECIALISTS IN THIS AREA PROBABLY KNOW AS MUCH OR MORE ABOUT THE SUBJECT AS ANYONE IN THE FRG-WHICH ACCORDING TO MELO MADE IT ALL THE MORE STRANGE THAT THEY HAD NOT BEEN CONSULTED.

6. ON THE MORNING OF MARCH 9, THE CNEN SIGNED AN AGREEMENT WITH THE FRG MINISTRY OF INTERIOR ON TRANSFER TO THE CNEN OF KNOWLEDGE AND TECHNIQUES RELATED TO NUCLEAR FACILITY PHYSICAL SECURITY.

7. YET ANOTHER AGREEMENT WAS SCHEDULED TO BE SIGNED DURING THE MORNING OF MARCH 10, THE LAST DAY OF GEISEL'S VISIT. THIS AGREEMENT, BETWEEN KWU AND NUCLEBRAS, IS FOR CREATION OF A JOINT VENTURE FIRM IN BRAZIL TO PRODUCE THORIUM FOR USE AS A REACTOR FUEL.

8. ONE ADDITIONAL TECHNICAL AGREEMENT WAS CONTEMPLATED IN THE AREA OF SHALE OIL EXTRACTION UTILIZING HTR PROCESS HEAT, BUT THIS AGREEMENT WILL APPARENTLY NOT BE CONCLUDED. MINISTER UEKI WAS QUOTED AS EXPRESSING THE BELIEF THAT THE BRAZILIAN UNCLASSIFIED

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SHALE OIL PROGRAM WOULD PRODUCE SATISFACTORY RESULTS IN A SHORTER TIME FRAME.

9. THE INTERNAL URENCO FUEL SUPPLY DISPUTE ALSO RECEIVED A GREAT DEAL OF ATTENTION. THE PRESS REPORTED EXTENSIVELY ON THE MEETING BETWEEN BRAZILIAN FOREIGN MINISTER ANTONIO AZEREDO DA SILVEIRA AND DUTCH FOREIGN MINISTER CHRISTIAN VAN DER KLAUW ON MARCH 7 IN WHICH SILVEIRA REPORTEDLY REFUSED TO DEAL WITH THE DUTCH GOVERNMENT ON THE FUEL SUPPLY ISSUE ON GROUNDS THAT THE BRAZILIAN CONTRACT WAS WITH URENCO, NOT THE INDIVIDUAL GOVERNMENTS COMPRISING URENCO. FROM THIS POINT, THINGS PROGRESSED RAPIDLY. ON MARCH 7, MINISTER UEKI WAS HEADLINED AS SAYING BRAZIL COULD BUY ENRICHED URANIUM FROM A VARIETY OF SOURCES, INCLUDING FRANCE AND THE SOVIET UNION. THERE HAD ALREADY BEEN SUGGESTIONS ON MARCH 6 ATTRIBUTED TO QUOTE BRAZILIAN AUTHORITIES INVOLVED IN THE NUCLEAR PROGRAM END QUOTE THAT BRAZIL WOULD NOT RENEGOTIATE ITS AGREEMENT OF COOPERATION WITH THE USG, THUS LIMITING ITS FUEL RELATIONSHIP WITH THE US TO THE INITIAL LOAD FOR ANGRA-1. BRAZILIAN AUTHORITIES ON MARCH 6 TRACED THE FUEL FOR THE FIRST RELOAD OF ANGRA-1 FROM YELLOWCAKE ALREADY IN BRAZILIAN HANDS (PURCHASED SOME TIME AGO FROM SOUTH AFRICA), TO CONVERSION TO URANIUM HEXAFLUORIDE BY BRITISH NUCLEAR FUELS LTD., THROUGH ENRICHMENT, HOPEFULLY BY URENCO, TO RECONVERSION TO URANIUM OXIDE AND FUEL FABRICATION BY THE RBUS SUBSIDIARY OF KWU. ON MARCH 7 PAULO NOGUEIRA BATISTA, PRESIDENT OF NUCLEBRAS, WAS QUOTED AS SAYING THAT THEY HAD ALREADY SIGNED A CONTRACT WITH KWU FOR FABRICATION OF THE FUEL ELEMENTS FOR THE FIRST RELOAD OF ANGRA-1 (REPLACING WESTINGHOUSE). FINALLY, ON MARCH 9, THE LONDON DAILY TELEGRAPH WAS QUOTED AS SAYING THAT THE BRITISH GOVERNMENT HAS AGREED TO SELL BRAZIL 500 TONS OF ENRICHED URANIUM AT A PRICE OF BETWEEN 80 AND 100 MILLION DOLLARS OVER THE NEXT FOUR YEARS. IT WAS SUGGESTED ELSEWHERE IN THE BRAZILIAN PRESS THAT THIS WOULD BE MADE POSSIBLE BY ENLARGEMENT OF THE CAPNHURST EN-

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RICHMENT PLANT.

10. IN ONE FURTHER DEVELOPMENT IN ENERGY-RELATED AREAS, ON MARCH 5 THE SIEMENS-BROWN BOVERI-AEG CONSORTIUM PRESENTED TO UEKI THEIR PROPOSAL FOR THE HVDC TRANSMISSION SYSTEM FROM THE ITAIPU HYDROELECTRIC PROJECT TO THE SAO PAULO METROPOLITAN AREA. THERE ARE NOW THREE PROPOSALS: A GERMAN OFFER, AN OFFER FROM ASEA ELECTRICITY OF SWEDEN, AND THE PROPOSAL OF THE GERMAN CONSORTIUM. IN COMMENTING ON THE PROPOSAL, FURNAS CENTRAIS ELECTRICAS PRESIDENT LICINIO MARCELO SEABRA REVEALED THAT CONSIDERATION WAS ALSO BEING GIVEN TO A 1200 KILOMETER HVDC TRANSMISSION LINE TO LINK THE NORTHEAST AND SOUTHEAST BRAZILIAN POWER GRIDS. CONSTRUCTION OF THE LINK WOULD AFFECT

THE LOCATION OF THE NUCLEAR POWER PLANT FOLLOWING THE ANGRA
COMPLEX BECAUSE IT IS INTENDED THAT THEY BE LOCATED IN SUCH
A WAY AS TO INTERCONNECTED WITH AS LARGE A POWER GRID AS
POSSIBLE.
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Message Attributes

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